

# Clinical Outcomes among mitral valve repair and replacement in active native mitral valve endocarditis

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## Introduction

The feasibility of mitral valve repair(MVr) in infective endocarditis(IE) are challenging approach, depend on center experienced. The benefit of mitral valve repair compare mitral valve replacement(MVR) in setting of active native mitral valve IE condition remain unclear. We evaluate the long term of clinically and echocardiographical outcomes between MVr and MVR in native mitral valve infective endocarditis.

We retrospective review and prospective data follow up 120 patients who underwent mitral valve surgery(MVR,MVr) on native mitral valve IE from Sep 2007 to Jan 2025, 94(78.33%) cases were MVr. 70(74.5%),19(73.1%); 47.03(14.02) , 40.50(13.61) and 6.76(2.95,17.37) , 9.86(4.86,24.60) were male, mean age and median euroScore2 on MVr , MVR group respectively. Perioperative , post operative echocardiographic data and long term clinical outcomes were evaluated.

Mean follow up for MVr and MVR were 166.28(147.39,185.18) , 138.52(106.23,170.81)months. Preoperative stroke , CHF with intubated were comparable(18.10%,23.1% p=0.57 ; 25.0%,34.6% p=0.42) on MVr,MVR group. Aortic cross clamp and CPB time were similar( 133.93(45.62)min,141.85(75.80)min P=0.62; 170.01(50.03)min,180.73(90.35)min P=0.57. 30 days mortality or In hospital mortality in MVr was 7(7.4%)superior than MVR 4(15.4%) p=0.21. For valve failure( $\geq$ moderate mitral regurgitation or mitral stenosis) freedom from valve re-intervention were 10(11.1%),6(23.1%) p=0.12; 97.48%,100% p=0.46 for MVr and MVR respectively. Kaplan-Meier for 10 years survival were (76.28% versus 53.68% P=0.08), 10 years freedom from major bleeding and composite freedom from major adverse events( Dead, valve re-intervention, stroke, major bleeding, recurrence IE) were (95.85% versus 81.06% P=0.01), (71.49% versus 41.58% P=0.001) for MVr and MVR respectively. By Cox regression multivariate analysis MVR was higher risk mortality(hazard ratio[HR], 1.08;95% confidence interval[CI], 0.46-2.53);p=0.85.

Mitral valve repair in active native mitral valve endocarditis should be encourage and appropriate when clinically and technically feasible, the long term survival and major adverse events were better than mitral valve replacement.